Arsenic Eaters. See page 370.

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HEALTH

A WEEKLY JOURNAL OF

DOMESTIC AND SANITARY SCIENCE.

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EDITED BY DR. ANDREW WILSON, F.R.S.E. &C.

VOL. XIII.—No. 336. FRIDAY, SEPTEMBER 13, 1889. [PRICE TWOPENCE.

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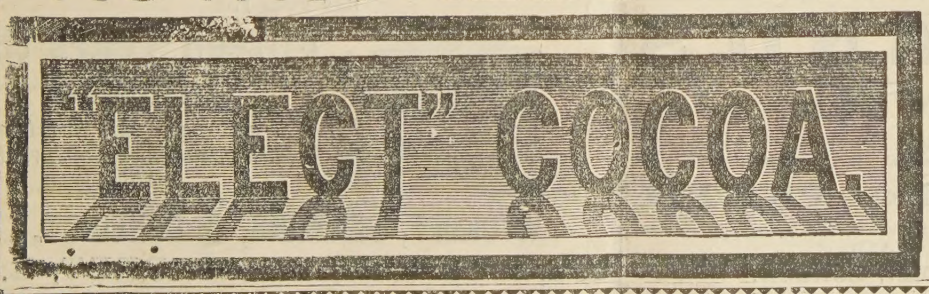

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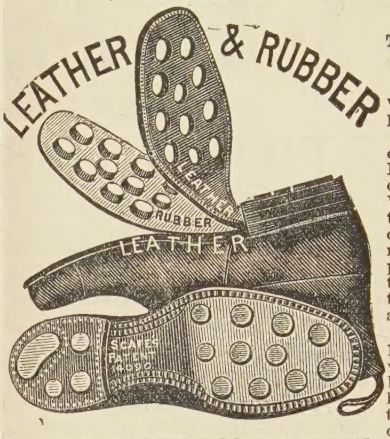

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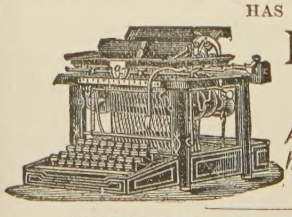

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HEALTH

EDITED BY

DR. ANDREW WILSON, F.R.S.E., &c.

LONDON: *FRIDAY, SEPTEMBER* 13, 1889.

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Notes by the Way

By the Editor.

"Health is the foundation of all our physical happiness."—*Herder.*

Ever since Health started its career I have run a tilt against the doings of the many quacks who fatten on the credulity and ignorance of the public. If I were at liberty to disclose the confidences made to me by many of my correspondents—whom I am happy to think I have saved from being further swindled by quacks—I might astonish my readers, both by the recital of the credulity of patients, and by the account of the knavishness of these leeches and pests of modern society. One correspondent of Health was fleeced of £400 in the course of two years by a Birmingham firm of quacks; hence I am glad to reproduce from last Saturday's *Times* the following report of a successful prosecution of a firm of quacks who have long fattened on the ignorance of the public.

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Here is the report in question:—"Unqualified Medical Practitioners.—At Birmingham yesterday (Sept. 6th) there were police prosecutions against three persons for treating disorders of a specified nature without being qualified medical practitioners. These are the first cases of the kind that have taken place in Birmingham under the Medical Act of 1858. It appeared that frequent complaints had been made by persons who had placed themselves under empirical advice of having been made the victims of extortion, and of finding themselves worse by taking the medicines prescribed. Charles Frederick Groom, of Great Charles-street, was summoned for falsely using the name of surgeon and the description of a member of the Royal College of Surgeons of England, thereby implying that he was then registered under the Medical Act of 1858, and for unlawfully pretending to be a physician by taking the name or title of Doctor of Medicine. Similar charges were preferred against John Marston, of Great Charles-street, carrying on business as "Dr. Hunter," and Jesse Key, styling himself "Dr. Curtis." For the prosecution it was stated that ten visits had been paid to the accused by persons who were free from disease, but whom the defendants nevertheless accepted as patients."

"With reference to Groom, it was stated that a pamphlet issued by him was examined at a meeting of the Royal College of Surgeons, and was found to be of so indecent a nature that a resolution expelling him from that body was passed. This was confirmed at a later gathering, and the result of their deliberations was conveyed to him. His qualification having been taken away, he had no right to assume the authority he did. Further evidence that he had acted as a member of that body when struck off their roll was to be found on his door-plate. Evidence was given by two detectives, who visited the defendant at different times when they were in perfect health and had received medicine and paid large fees for their supposed ills. On each occasion the defendant described himself as Dr. Groom, and Marston was introduced as "Dr. Hunter." The latter demanded, and received, a consultation fee of £1, and £1 for medicine, and informed his visitor that his case was a very serious one, though he was in reality quite healthy at the time. The evidence against Jesse Key was of a similar character. Eventually all three men were convicted on two charges each, and fined the *maximum* penalty of £20 in each case, or £40 in all, and costs."

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I happened to have seen the literature which these persons issued from their nest at Birmingham, and I can only describe it as filthy in the extreme. How any sensible persons could have consulted these men after a perusal of their works has always puzzled me. Now that the Birmingham prosecution has been successful, we may perhaps see a London prosecution instituted against the quacks of Wardour-street and elsewhere, whose doings I have more than once freely laid myself open by libelling them, to expose in open court. Needless to say my invitation has never been accepted.

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The "religious" and "reverend" quack hailing from London and New York is another person who "never would be missed." This philanthropist advertises that he will send a prescription gratis for the cure of nervous debility so-called. When the patient receives the prescription, he finds it to consist of the names of herbs which either have no existence at all, or which are not in ordinary medical use. Hence he is driven back to the quack, who offers to procure the said valuable herbs for a fee varying in amount from £1 to £5. To show how quacks of this description swindle their dupes, I reproduce the following letter from *The Chemist and Druggist.*

✣ ✣ ✣

Messrs. Potter and Clarke, of 75, Weston-street, London, S.E., write under date 21st August:—"We are daily receiving inquiries for drugs to make up the following prescription:—Ext. corrasa apimis, 8 drachms; ext. selarmo umbelifera, 4 drachms; powdered alkermes latifolia, 3 drachms; ext. carsadoc herbalis, 6 drachms. Some year or so ago there was a demand for the same thing, and an exposure of the fact that above names are absolutely fictitious appeared, we believe, in your journal. The *Therapeutic Gazette* of April, 1883, published an exhaustive analysis (by Dr. A. B. Lyons, of Messrs. Parke, Davis and Co.'s staff) of the compound as procured from Rev. Joseph T. Inman, New York, and gave the following result:—Powdered gentian, about 15 parts; powdered liquorice, about 15 parts; powdered sugar, about 50 parts; sodium bicarbonate, about 17·5 parts; powdered cochineal, about 2·5 parts. As it is evident from the number of inquiries we receive that the remedy is again being advertised we hope you will find

room for this communication." The public should know that if they do send their guineas to the quack, they will receive about sixpennyworth of gentian and liquorice and so forth, in place of the mystic herbs culled from the virgin forests of the tropics by a benevolent missionary.

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I AM often asked for a remedy for excessive perspiration of the feet. In answer to several inquirers, I may again notify a remedy which is used in the German army. The medical department of the army has just recommended painting the skin of soldiers' feet with a 5 or 10 per cent. solution of chromic acid once in two or three weeks; indeed, in some cases, an interval of six or eight weeks suffices. It is said that the remedy was tried on 18,000 soldiers before its use was thus recommended. Another remedy is the powder used in the German army for sifting into the shoes and stockings of the foot soldiers, called "Fuss-streupulver," and is said to consist of three parts salicylic acid, ten parts starch, and eighty-seven parts pulverized soapstone. It keeps the feet dry, prevents chafing, and rapidly heals sore spots. Finely pulverized soapstone alone is also said to be very good.

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IN one case, says a medical journal, a nursemaid was treated with a lotion of pure carbolic acid, one in three. The feet were bathed with this; next morning they greatly inflamed, she was put to bed and dilute lead lotion applied; in three days she was able to resume her duties, and down to the time of writing (three and a half years) had been free from the affliction. Another correspondent recommended a special preparation of eucalyptus, called eucalyptol cream.

✣ ✣ ✣

DR. J. L. MINER, of Tennessee, has examined the eyes of 682 children in the schools of that town. He found the refraction to be normal in 523, long-sightedness prevailed in 128, and short-sightedness in 32. The latter was found only in children of the fourth class, no less than 15 per cent. of these being affected.

✣ ✣ ✣

LATELY Mr. John Aitken visited the Ben Nevis Observatory in connection with the proposed investigation into the number of dust-particles in the atmosphere. From observations made by him and Mr. Omond, the numbers varied from 350 per cubic centimètre about noon to 500 at 3 p.m. The purest air previously examined by Mr. Aitken was on the Ayrshire coast, and gave 1,260 dust-particles to the cubic centimètre. It is, of course, premature to draw conclusions from these observations, but it may be suggested that extended observation will in all probability establish the fact of the singular purity of the air at this height, as compared with that at lower levels; and that the number of dust particles will be greatest at the Observatory in that part of the day when the ascending currents up the heated sides of the mountain are strongest.

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THE preliminary programme has been issued of the eleventh Congress, to be held at Worcester from the 24th to the 28th of September, 1889. Congress tickets and all information can be obtained by application to the secretary, E. White Wallis, Esq., F.S.S., Parkes Museum, 74a, Margaret-street, W. The Council invite papers on all subjects relating to health and sanitary science, reserving the right, of course, to refuse unsuitable papers. A short abstract should accompany each paper, the reading of which, if accepted, will be limited to twenty minutes.

Original Essays

"Life is not to live, but to be well."—*Martial.*

ARSENIC-EATERS.

By C. MARSHALL.

THE verdict and sentence in the Maybrick case called renewed attention to the habit of arsenic eating in some continental countries. There can be little doubt but that, when reconsidering the verdict, and in commuting the death penalty to that of imprisonment for life, the Home Secretary fully investigated the points brought out in evidence as to Mr. Maybrick's proved habits of using arsenic for years, and up to a short time before his death.

In the year 1851 a remarkable paper from the pen of Dr. Tschudi, of Vienna, appeared in one of the medical journals there. In it he fully described a habit existing among the Styrian peasants of eating arsenic. The poison was taken in the form of common white arsenic, the eater beginning with small doses and gradually increasing them as he became accustomed to its effects. The result of the habit was a brightening and freshening of the complexion, and a distinct gain in the breathing powers. Mountaineers and chamois hunters ate arsenic in order to easier climb the steep hills, and their wives, daughters, and sweethearts used it that they might acquire *embonpoint* and a clear complexion.

In Vienna the poison was administered to valuable horses, with the result that they became sleeker, glossier of coat, more spirited, and better of wind; and it was stated that if a horse once used to arsenic was afterwards deprived of it, he would become thin, sickly, and well-nigh useless until the poisonous diet was resumed.

Although this custom of arsenic-eating seems to have been known to German, and especially Styrian medical men, long before the publication of Tschudi's paper, physicians elsewhere were generally ignorant of it. In certain scientific circles the statements were received with the greatest incredulity. The best toxicologists, Christison and Taylor among them, stigmatized the whole story as absurd. Taylor was especially pronounced in his unbelief, and in his famous work on poisons took pains to contradict the German writer. And still later in 1856 Mr. Kesteven published a paper in a medical journal, in which he endeavoured to show that Von Tschudi's statements were utterly fallacious and untrue. To be sure, it was admitted that the Styrian peasants might be accustomed to eat some white substance which might possibly be mistaken for arsenic; but, as no analysis had been made, it might be perhaps oxide of zinc or chalk. And, moreover, it was urged that the account given by the German writer of the alleged habit was utterly opposed to all that was known concerning the action of arsenic upon animal organisms, and, therefore, could not be true.

But the question of course could not rest here. A controversy was started, and had to be fought out. Furthermore, the statements concerning the the alleged custom had become widely known among unscientific people, and individuals seeking for rosy complexions were likely to poison themselves. Therefore, the subject was to be fully investigated, and all doubts put at rest. Investigations were accordingly set on foot in several different quarters,

and resulted in the complete confirmation of all that Von Tschudi had put forward.

In the year 1860 several papers upon the arsenic habit appeared in the medical and other scientific periodicals. Among the first of these was one by Dr. Edouard Schäfer, of Gratz, the capital of Styria. According to this writer, the habit prevailed chiefly in the north and north-west portions of Styria, its subjects being usually strong, healthy, labouring people of both sexes. The beginner would start with a fragment of arsenic the size of a millet seed, and gradually increase the dose to two, four and a half, and five and a half grains. Two grains here, in England, is usually considered a dangerous quantity. Schäfer procured many reports from medical men, and one from Dr. Knappe, of Oberzehring, who had examined a labourer, strongly built, always in good health, who had been addicted to the arsenic-eating habit for twelve years. In the presence of Dr. Knappe this man swallowed a fragment of the poison weighing four and a half grains, crushing it between his teeth. The next day he returned and swallowed another fragment of five and a half grains without suffering any inconvenience from the effects. His appetite was good, he was accustomed to indulge much in spirits, and used the arsenic two or three times a week.

Mr. Heisch contributed an important paper on the subject to the *Pharmaceutical Journal* in May, 1860. He had been in correspondence with a number of medical men in Styria, all of whom confirmed the practice of arsenic-eating. According to Heisch, the poison is taken fasting, in some warm liquid such as coffee. In the long run, the complexion and general appearance of the eater are improved; but the first doses taken by a beginner are apt to produce unpleasant effects, such as slight symptoms of poisoning. When once acquired, the habit can only be left off by degrees, as a sudden cessation is followed by sickness, intense burning pains in the stomach, and finally death. Mr. Heisch was enabled to enter into direct correspondence with a confirmed eater of arsenic, a well-educated man, the superintendent of some arsenic works. This person stated that he acquired the habit through the advice of his chemical teacher, in order that he might not suffer from the fumes emitted from the works. At the time of writing he had eaten arsenic for a number of years, beginning with a daily dose of three grains, which he had increased until his usual allowance was *twenty-three* grains of the poison. By the advice of his friends he had at one time tried to abandon the habit, but the attempt was attended by faintness, depression, loss of sleep, and other dangerous symptoms. Death would most certainly have ensued had the trial not been abandoned. The most astonishing feature in this case is the size of the dose to which this eater had accustomed himself. *Twenty-three* grains of white arsenic one would think certain to prove fatal.

Several other cases were brought forward by Heisch. One eater consumed a daily modicum of from twelve to fifteen grains of the poison, while another took daily five grains in the form of Fowler's Solution.

Professor Sir H. Roscoe, of Manchester, contributed a paper to the "Memoirs of the Literary and Philosophical Society of Manchester." This paper is valuable on account of an analysis by Roscoe of a sample of the white substance eaten by the Styrian peasants. The specimen was received from a friend in Styria, and was found to be pure arsenious acid. Roscoe had at command a number of reports on the habit from seventeen Styrian physicians addressed to Dr. Julius Elder Von Vest, Government Inspector at Gratz.

These reports all agreed in the essential particulars. One of the writers, Dr. Holler, of Hartberg, testified that it was quite common in Styria to put arsenic into cheese in small quantities in order to flavour it and give it stomachic properties. He himself had often seen such cheese prepared, and had partaken of it.

Dr. R. Craig Maclagan, of Edinburgh, in June, 1865, contributed a paper to the *Pharmaceutical Journal*. He had visited Styria, and met the arsenic-eaters face to face. He states that the poison is taken for several reasons, namely, to improve the complexion and appearance of the eater; to strengthen the wind; to preserve the health; and as a condiment, tonic, stimulant, and prophylactic. One eater, Matthias Sittler, aged 26, swallowed five grains of arsenic in the presence of Maclagan; and another, Joseph Flecker, who had been subject to the habit for 15 years, took a dose of six grains. In neither case did the subject suffer the slightest inconvenience.

In 1866, Dr. De La Rue contributed to the *Boston Surgical and Medical Journal* the report of a case of arsenic-eating that he had met with in Canada. Here the subject was an Englishman, in good health, married, with a large family. For some twelve years he had been addicted to the habit, having begun to eat arsenic in order to ward off consumption, which was hereditary in his family. His own exemption from the disease he quite naturally, but perhaps erroneously, ascribed to the use of the poison. When he began eating it he knew nothing of the effects of arsenic. Accordingly, he bought two ounces of the substance, and used it with varying frequency from one to six times daily. The whole quantity lasted him six to eight weeks, part of it being eaten in coarse powder and part mingled with tobacco and smoked in a pipe. In the presence of Dr. De La Rue in his laboratory the subject swallowed four grains of pure arsenic, taken from the doctor's laboratory, and twenty minutes afterwards smoked an additional grain in his pipe. No unpleasant effects followed, and the Englishman offered to take as much again if La Rue wished.

In 1875, at a Congress of physicians and naturalists held at Gratz, Dr. Knappe introduced to the meeting two arsenic-eaters, one of whom there and then ate five grains of white arsenic and the other four grains of yellow arsenic, without any unpleasant results or inconvenience whatsoever. Now all these cases go to prove that arsenic or arsenious acid can be eaten with apparent impunity by those used to its effects in doses which are commonly believed to be poisonous; and the fact is established that the human system is in some measure tolerant of the poison, and accommodates itself to the use of arsenic.

The habit is clearly a very dangerous one, the confirmed eater *must* in general continue in his dangerous path or run the risk of death. The habit may be abandoned by slow degrees, but there is risk in the trial. In Maybrick's case it is hard to understand that, taking into consideration the man's habit of drugging himself with arsenical compounds for a long period, the amount of arsenic found in the body could in this particular instance have been sufficient to cause death as alleged by the Crown. The amount that was found was admittedly less than one grain of poison. An ordinary fatal dose to an ordinary person not tolerant of the poison is about two grains; but, as has been shown, four, five, and six grains can be taken continuously with impunity by these Styrian mountaineers and peasants.

Personal Health

"Be timely wise;
With health all taste of pleasure flies."—*Gay.*

HOW TO GET TO SLEEP.

By a Long Sufferer from Insomnia.

Of the proper use of Narcotics.—Like so many other things, it is the abuse, not the judicious use, of narcotics which is to be deprecated. The great danger is in the constantly increasing doses in which the injudicious indulge. This must be absolutely avoided, as it too frequently leads to fatal results. There can be little doubt, however, that the occasional use of a narcotic is not only harmless, but desirable. I am convinced, from long experience, that it is better to get sleep from a mild narcotic than not to get sleep at all. But, nevertheless, it should be indulged in as seldom as possible, and never in increasing doses; and it should never be resorted to until every effort to obtain natural sleep has failed.

I have a mixture given to me by a well-known London doctor, which I always keep by me, and which, I am convinced, has, on more than one occasion, saved me from utter collapse. In giving me the prescription the doctor remarked that I might take it for twenty years without it doing me any harm. I do not, however, endorse this opinion, as the sensations following sleep induced by the mixture are not so healthy as those which follow natural sleep; and I think, moreover, it induces considerable depression of spirits. One year, in which I underwent a severe domestic trial, I was obliged to resort to it frequently; but after a time, when a more healthy tone of body and mind supervened, I gradually reduced the dose until I was able to relinquish it altogether, except at rare intervals. But even now, if I go from home and run the consequent risk of a bad night from a strange bed or strange noises, I always carry a dose or two with me, and can therefore, to some extent, defy the disturbing influence.

Examples—not to be followed.—While on the subject of narcotics I may mention two remarkable cases which came under my own observation, and which, therefore, I know to be true. One was that of a doctor in a provincial town, who underwent a series of most distressing domestic afflictions, which entirely robbed him of sleep. He resorted to chloral, and every night for twelve years took a tablespoonful of the syrup, and lived to the age of seventy-two. During the whole of this time he was able to continue his practice, and seemed comparatively healthy. The other case is still more remarkable. It is that of a solicitor in a provincial town, who is still a hale man of eighty-four, and who has never gone to bed without a narcotic since he was twenty-five. In spite of these startling facts it must be by no means understood that I in any way favour such a system. The utmost caution in the use of narcotics is requisite. The desire for them is as insidious in some minds as the craving for alcohol is in others, and unless there is sufficient strength of mind to resist the inclination to increase the dose it is better to avoid it altogether.

Sent to sleep by Sulphonal.—The foregoing remarks were written before I met with the letters and articles recently published in the *Pall Mall Gazette* on the new remedy for sleeplessness, *Sulphonal*. This drug had previously been mentioned to me by a friend, whose cousin, a doctor at Vienna, had recommended it to him, but I found at that time that it was not retailed by chemists. After reading the article in the *Pall Mall Gazette*, I again inquired about it, and found that I could procure it at my chemist's in the tabloid form. I think it not improbable that my experience of this wonderful drug may not be wholly uninteresting. The dose recommended was from three to eight tabloids, crushed up and mixed with a small quantity of water or milk. I have only used the former. I thought under these circumstances that four tabloids would be considered a moderate dose; and, acting on the suggestion in one of the letters on the subject, I took it about three-quarters of an hour before going to bed.

A very few minutes after laying my head on the pillow I was asleep, and *I slept as I had not slept since I was a child.* Even in the morning when I awoke I still felt sleepy, and turned round on my pillow and went off again. At about 7.30 I awoke, feeling perfectly well and more refreshed by my night's rest than I had felt for years. The next night I reduced the dose to three tabloids, and had another good sleep for about five hours, and afterwards for another hour or two. By way of experiment I then took five tabloids. I slept very soundly, but awoke with a slight headache. I am not sure whether I am right in ascribing this to the drug, because on those rare occasions when I have slept long and soundly without any drug I have almost invariably risen with a headache. I continued taking the smaller dose night after night, and watched carefully to see whether my general health was in any way affected. I am bound to admit that I felt better in every respect. I had more energy for my work, my digestion was better, and my whole nervous system seemed improved.

Still I could hardly believe that the continuous use of the drug would not entail some evil consequences. I therefore paid a visit to the manufacturers, Messrs. Burroughs, Wellcome & Co., and laid the case before them. I received an assurance from them that the drug had been tested in every way, and that it left absolutely no after effects. It does not affect the brain, heart, or digestive organs; its action is to soothe the nerve centres, and thereby induce sleep. They mentioned to me a very extraordinary case. A workman in Berlin wishing to try the effect on his wife, thought he would try it himself first. He took two tablespoonfuls of the crystals, or about 240 grains, the usual dose being from fifteen to forty grains. The effect of it was to send the man to sleep for ninety hours. He then woke up for a few hours, and went to sleep again for another twenty-four hours, and finally got up quite well. This seems a pretty fair test of its harmlessness.

Waiting for the test of time.—I have now continued taking the drug for a month, with the exception of a few nights, when I slept about the same time as I had previously slept. I am bound to admit that my nights have been more enjoyable than any I have had for years, and my general health is undoubtedly better. The sleep induced is precisely the same as natural sleep, at first sound, then followed by pleasant dreams, and the desire to sleep again when you wake. On the other hand, the effect of chloral and other hypnotics and narcotics is to send you into a sort of dull dreamless stupor for a certain number of hours, from which you suddenly awake without any further desire to sleep. Still, however, as a doctor told me, the test of time has to be applied to Sulphonal, and it is possible that its continuous use for a prolonged period may have some injurious effects. So far, however, as my experience goes, it has been to me a sort of elixir of life; and, if no evil results are to follow, it is destined to be, as I informed the manufacturers, one

of the greatest blessings that can be conferred on suffering humanity.

I have written the foregoing sketch of my experience in the earnest hope that sufferers like myself may derive some benefit from my suggestions, and may attain that comparative immunity from suffering which I now enjoy. None but those who have gone through a similar experience can understand how painful it is. Even now the remembrance of it comes back to me like a dark shadow on my life.

FLEA-BITES.

To many people, more particularly the residents of large towns, who travel much on the railway, fleas constitute a very great plague. These little insects trouble light-complexioned people more than brunettes. Sometimes after a flea-bite the part swells enormously within a very few minutes. Writers on skin-diseases mention that the body of flea-bites has frequently been mistaken for skin-diseases. We have ourselves counted more than 150 flea-bites upon one individual.

We have frequently known a mother bring her child for medicine, under the impression that it had a skin-disease, whereas it was suffering from flea-bites, and nothing else. We have known a man troubled with one flea, which has clung to him for several weeks, while travelling on the continent; at last he found it, and his troubles were over. Some people will be awakened almost every hour in the night if by any chance they have taken a flea during the day. Now, while all this may seem to many a trivial matter, yet the suffering involved, the irritation, and the itching are trying to the limit of endurance.

It is frequently next to impossible to desist from scratching the bitten part; but scratching only aggravates, and makes matters worse. Our readers, such of them as are at times afflicted with fleas, will find it to their advantage to have a small box of "Vinolia" always by them; this emollient cream is admirably adapted to all forms of skin-irritation, and relieves itching at once.

TO KEEP IRON PIPES FROM RUSTING.—A simple and economical way of tarring sheet-iron pipes to keep them from rusting is the following. The sections as made should be coated with coal tar and then filled with light wood shavings, and the latter set on fire. It is declared that the effect of this treatment will be to render the iron practically proof against rust for an indefinite period, rendering future painting unnecessary. In proof of this assertion the writer cites the example of a chimney of sheet iron erected in 1866, and which, through being treated as he describes, is as bright and sound to-day as when erected, though it has never had a brushful of paint applied to it since. It is suggested that by strongly heating the iron after the tar is laid on the outside, the latter is literally burnt into the metal, closing the pores and rendering it rust proof in a far more complete manner than if the tar itself was first made hot and applied to cold iron, according to the usual practice. It is important, of course, that the iron should not be made too hot, or kept hot for too long a time, lest the tar should be burnt off. Hence the direction for the use of light shavings instead of any other means of heating.

The Family Circle

"The child is father of the man."—*Wordsworth.*
"In bringing up a child, think of its old age."—*Joubert.*

OUR GRANDMOTHERS' COOKING:

GLEANINGS FROM THE RECIPE BOOKS OF ONE HUNDRED YEARS AGO.

OLD cookery books seem to bring us much nearer to our dead and gone progenitresses, and show us that, though they did not read much, and could do mighty little in the way of spelling, they were simpler, and perhaps sweeter, women than their granddaughters. They could scarcely fail to be so, for the mere exercise of the one art, which they practised as an art, brought them hour by hour in the most intimate relation with nature and her bounties. In the season when green things flourished, hardly a day can have passed without these good ladies themselves going into their gardens to seek the faggot of sweet herbs which was to impart flavour and fragrance to their "ragoos" and savouries, or the marigolds which poor Charles Lamb hated so much when they floated on his mess of Charter House pottage, but which Simple Susan's enemy Barbara found so tempting.

The greater part of our grandmother's lives must have been spent in culling simples, expressing juices, gathering fruits, and spying out things to pickle. This was not done haphazard. Was there anything that the women of a hundred years ago did not pickle or preserve? They pickled parsley green to cheat grim winter of some of its terrors; they pickled "nasturtions"—and a very excellent pickle they make. They pickled the large shoots of elder to imitate "the Indian bamboe." "They put out in the middle of May, and the middle shoots are the most tender." They pickled green walnuts "when they will bear a pin to go into them"—which is also done to this day. They were aware that "the clusters of elder-flowers makes (*sic*) a delicate pickle before it opens," and that to effect this it was only necessary to pour vinegar over them. They also knew that the seeds of elder should be pickled while still green, as a substitute for capers, and that "large cucumbers of the kind called green turley, prepared as mangoes, are excellent, and come sooner into eating." They pickled radish-pods, young artichokes, horse-radish, samphire, marigold flowers, and more things than can well be enumerated.

Having pickled nearly every green shoot, stalk, pod, and seed, they began to do the same by plums, apricots, peaches, currants, and grapes. When they set about making jams, no fruit escaped them—they even attacked vegetables. When they made cakes it was the same. Parsnips, raspberries, &c., were made into cakes, and red beet-root, potatoes, and oranges into biscuits. Wine-making, too, was then a recognized branch of female industry, and every fruit in turn was chosen as a basis, and some flowers and vegetables—notably cowslips and parsnips—were promoted to the same dignity. There is a very pretty recipe for cowslip mead, made of honey, lemons, seven pecks of cowslip pips, and a handful of sweetbriar. The sweetbriar is a delicious ingredient, but think of picking seven pecks of pips! A recipe is given for making elder-flower wine "from the tree which bears white berries." We are confidingly told that "it drinks very like Frontiniac." Wine of black elderberries is said to be equal to the best Hermitage claret; and another recipe instructs us how to make wine of white

elderberries. Or sycamore, birch, walnut, blackberry or balm wines—all these were once made by fair and dainty housewives, and now are made no more.

And then there was shrub, wherein to one gallon of new milk, flavoured with lemons and Seville oranges, was added two quarts of red wine, two gallons of rum, and one of brandy. Sweet dishes, also, were generally made by the ladies of the family, and there is much play of fancy in the naming of them. In turning over the pages, we find directions how to spin gold and silver webs for dessert, to spin birds' nests, to make a Chinese temple or obelisk, a fish-pond with silver and gold fishes, a hen's nest, with strips of lemon for straw, and eggs filled with flummery, a hen and chickens in jelly, a desert island. "Take a lump of paste and form it into a rock three inches broad at the top, set it in the middle of a deep china dish, and set a cast figure on it with a crown on its head and a knot of sugar candy at its feet," &c. "If this dish is for a wedding supper, put two figures instead of ene," so the desert island is not so much of a desert after all. Next comes a "rocky island," and then a "floating island," with sheep, swans, "or you may put in snakes, or any wild animals of the same sort." Moonshine is another dish with a pretty name, and there is likewise a recipe for "moon and stars in jelly," a half moon with seven stars shining out of flummery coloured with cochineal and chocolate to imitate the colour of the sky.

We still have numbers of people among us whose eye for colour is as fine as that of the inventor of this; but who now makes moon and stars in jelly? "Solomon's Temple in flummery" is a yet finer flight of the imagination. A recipe for making an amulet takes our fancy, but loses its attraction when we find it is only Mrs. Raffald's way of spelling omelet. Who can say how much the construction of some of these quaintly-named and delicately-compounded dishes may have been to our grandmothers? Perhaps it was their poetry, their sphere of art, their one escape from the monotony of their quiet lives.

HEADACHES AND HEARTACHES.

THERE are a good many kinds of headache. In these days the nervous headache is a very distinct variety. It is generally in the front of the head, across the forehead, over the eyes. But it may be in other parts—at the top of the head, at one or both sides, at the back, or all over. It is painful, depressing, disabling. A man feels, at the height of the paroxysm, like a hunter who has galloped his legs clean off, and who could not leap a three-foot ditch to save his life. The spur is of no use, neither is the whip. The pain in the head is worse to bear than either, and the patient will rather endure both whip and spur than make any kind of effort which will make the head pain worse. Physic by itself is of no use. There is not a single drug known to medical science which will of itself at once and permanently cure a nervous headache.

On the other hand, drugs are not always needed. A complete change of air and circumstances will usually take away the pain in ten or twelve hours. Perfect rest, of a duration proportioned to the severity and long continuance of the symptoms, will make the cure permanent. There are, of course, methods of relieving or diminishing the pain until such time as it may be possible to obtain the complete rest. But the rest is the thing to be secured at all costs. If not, the pain goes from bad to worse, and the risk from less to greater. The final consequence it is impossible to predict, except that a breakdown is sooner or later inevitable, and the breakdown may be for a year or for a lifetime. A nervous headache is a danger signal; if it be frequent, the danger is increased; if it be continuous, a catastrophe is imminent. The driver must put on his brake at all hazards, or he will probably soon have a leap for his life.

There are very few sets of circumstances in which it is a man's duty to go on with his work when he is in this condition, at all risks. Even a threatened bankruptcy had better be risked than a threatened life. Besides, a man who is in the unyielding grip of a permanent nervous headache is not really the best judge of his own circumstances. He magnifies and distorts things amazingly. He takes counsel of his fears, and abandons his hopes and courage altogether. Rest, we repeat—immediate and sufficient rest—is the sovereign remedy. A fortnight at once may be better than a year six weeks hence.

A weak heart seems to be decidedly more practically inconvenient than a weak head. If a man or a woman be a little feeble about the region of the brain, it is generally of little moment. Some post or other will be provided if the conduct be respectable; and lack of brains is too common to excite any particular attention either in the person concerned or in those about him. But a weak heart insists upon putting itself in evidence at all sorts of convenient and inconvenient times. If its possessor finds himself rather late for his morning train, and makes a "spurt" to recover lost time, the exertion is usually followed by such a "bad quarter of an hour" that he resolves in future rather to lose a dozen trains than to risk temporary suffocation or permanent syncope again.

The practical evils that are associated with a feeble heart are innumerable, and will readily suggest themselves to those who possess so unsatisfactory a pumping engine. Weak hearts are by no means so common as is often supposed. Many a man who thinks he has got one is merely dyspeptic; many a woman owes her symptoms to tight lacing or insufficient feeding. If the dyspepsia be cured, or the tight lacing be dispensed with, the symptoms of heart weakness will disappear. Even when the heart is genuinely "weak," the weakness is not always due to special disease of that organ. It may be only part of a general weakness of the whole system, which is easily curable.

The late Sir Robert Christison, one of the most eminent of British physicians, used to smile at certain persons who were always complaining of weak hearts. "Gentlemen," he would say to his students when lecturing on digitalis, "gentlemen, the best tonic for a weak heart is a good brisk walk." Not a doubt of it. The majority of weak, flabby hearts are weak and flabby because every other muscle in the body is weak and flabby, and this general weakness and flabbiness is due to want of vigorous use. Exercise of the legs and back and arms gives additional and much needed exercise to the heart, and the heart grows strong by vigorous exercise, exactly as every other muscular organ does, for the heart is a muscle.

If a man has no organic disease of the heart, no enlargement, and no functional disorder, plenty of brisk walking, with occasional running, will soon dispel his breathlessness and heart weakness, other things being equal. The muscular inactivity of the modern town man is the parent of more ill-health than any other single cause whatever.

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The medical staff of the Local Government Board is evincing a remarkable activity—elaborate reports on epidemics or on the distribution of special diseases follow each other with unprecedented rapidity. The latest consists of reports on diarrhœa by Dr. Ballard, and on diphtheria by Dr. G. B. Longstaffe. These reports are illustrated by lithographed diagrams, and the volume containing them covers over 150 foolscap pages. It is sold by the Queen's printers at 8s., and is a document of the highest importance to sanitarians.

Dr. Ballard's investigations on the causation of diarrhœa have extended over the last eight years. Leicester and Islington are the scenes where his inquiries have been principally carried on, and though medical practitioners all over the country were invited to assist in the investigation, it is surprising to find how meagre was the response, when it was discovered that the assistance requested involved a certain amount of work and no pay. At first promises of assistance came from 130 practitioners scattered over the country. Of these a large number forgot their promises straightway; others who began to record their cases soon abandoned the unprofitable task, another set misunderstood their instructions, and ultimately only three remained from whom contributions of real service were obtained. One of these, Dr. Bruce Low, then medical officer of health at Helmsley, in Yorkshire, has since been appointed to a Government position, perhaps as a reward for his faithfulness. The other reports come from Stourbridge and Redditch. Drs. Klein and Cash have been associated with Dr. Ballard for the purpose of the requisite pathological and chemical studies incidental to the inquiry.

Diarrhœa is the nominal cause of one-tenth of all deaths of children under five years of age. It is therefore a most promising field for sanitary investigation. It cannot be expected that any great progress should have been made by the inquiries here recorded, abundant though they are, in the direction of reducing this great mortality; but much has been accomplished if, as may be hoped, the way has been indicated where the cause of the disease may be traced. Dr. Ballard has a rather Johnsonic style of writing, and his report is studded with such gems of commonplace as the statement that "Diarrhœal mortality is the sum of two factors, namely, prevalence and fatality. Both of these differ in the same place in different years and different periods of the same year;" which seems to be about equivalent to saying that the mortality depends on the number of deaths. It is well, however, to begin at the beginning; and having laid down the axiom we have quoted, Dr. Ballard proceeds to establish the generally known fact that the mortality varies with the temperature. But he does not think it is directly influenced by the atmospheric temperature. As far as his statistics go he finds its variations to correspond more constantly with the temperature of the earth. His next observation is that much depends on the soil on which the houses of a locality are built, a rock being the ideal and sand the worst sanitary condition for diarrhœa. Dampness in the soil has also an influence; and the free circulation of air in and around dwellings tends to check the prevalence of the complaint. All these circumstances suggest the existence of an organic growth associated with diarrhœa, and it is when the conditions are especially favourable for the development of this organism that an epidemic results.

From this foundation, not altogether original, but now for the first time based on exact statistics, Dr. Ballard proceeds to suggest the explanation of what may be called the secondary causes of diarrhœa. For instance, it is a general observation that children fed by the bottle are much more liable to the disease than children fed from the breast; and certain fruits have a special reputation in connection with the causation of diarrhœa. But Dr. Ballard seems to believe that it is not the fruit nor the food in the bottle which has inherent diarrhœa-producing properties; but that these are often suitable media for conveying the organic poison which is the disease-producer. Hence he strongly recommends that all food should be kept in cool, dry, airy pantries, the milk should be boiled on being received into a house, and, of course, he advocates, besides, many precautions to promote better ventilation in and around houses, such as a prohibition of back-to-back-built dwellings, concrete foundations, and so on. From a medical point of view his remarks on the nature of the disease are of considerable importance. He regards it as a specific disease of which the diarrhœal discharge is only a usual but not quite an invariable symptom. The observations recorded go to show that the kidneys are as certainly affected by this disease as the intestines, and Dr. Ballard believes it to be highly probable that many cases of Bright's disease have originated in an attack of diarrhœa.

Dr. Longstaffe's treatise on the geographical distribution of diphtheria is almost purely statistical. He compares the diphtherial mortality of the registration districts of England and Wales with the relative density of population in those districts, and comes to the conclusion that where population is dense there is less diphtheria, and that the disease flourishes most in sparsely-populated regions. Taking a period of six years, it is found that for the whole of England and Wales the death-rates for dense, medium, and sparse districts are 123, 182, and 248 diphtheria deaths per million living respectively. It will be seen at a glance (on a specially figured map) that while the sparsely-populated Eastern Counties are generally very dark, London, Lancashire, and other thickly-populated districts are comparatively light; that the West Riding of Yorkshire is the most fortunate division of that county; and so on. The statistical results thus indicated are to a considerable extent borne out by more minute analysis of the registration figures. The practical deduction suggested by these facts is, in Dr. Longstaffe's opinion, that the cause, or causes, of diphtheria should not be sought for primarily in any high development of civilization, such as sewers, but rather in some condition associated with a more primitive mode of life. Again, privies and ash-pits can hardly be important agents in breeding or disseminating the disease, or we should expect to find diphtheria exceptionally prevalent in those northern towns where such nuisances reach their worst, whereas the contrary is the case. On the other hand, low vegetable organisms developed in damp dwellings would perhaps fit in with the facts brought forward; or, again, some evil special to shallow wells or other primitive sources of water supply. The line of investigation, however, which seems most promising lies in comparative pathology. The peasantry live on terms of great intimacy with domestic animals, more particularly cows, sheep, pigs, and poultry (including pigeons). Some little-known disease of some one or other of these creatures may be capable of inducing in men or women

brought into frequent and close contact with them a trivial "membranous sore throat"; then, under suitable conditions of recipient and environment, the more generally recognized form of the disease, "true diphtheria," or, as it used to be called, "cynanche maligna," may result. The poison, perhaps gathering intensity and infectiveness, may then be conveyed into towns by farm produce, such as milk, cream, or poultry, conceivably by eggs, meat, or vegetables; and, lastly, through the persons first infected, the sources of water supply, or the public sewers may get poisoned, and so indirectly aid in the spread of the disease.—*Chemist and Druggist.*

THE PREVENTION OF CONSUMPTION.

DR. CORNET, of Berlin, whose remarks we quote from a medical contemporary, writing on the above subject, maintains that the aim of the physician should be to prevent the entrance of infection with the tubercle bacillus or germ into the body. This object had hitherto been, and still was, much neglected; while the connection of the conditions of life and development of the specific germ with the mode of infection and the possibility of resisting it was neither thoroughly known nor adequately appreciated.

The proposal to forbid phthisical persons to marry, he said, was absurd. The uselessness of earlier prohibitive measures enacted without knowledge of the nature of the infective material was pointed out. The theory of the ubiquity of the tubercle bacillus, which, with a certain appearance of greater justice, had been advanced against the possibility of prevention, must be looked upon as disproved. It was only in the case of the rooms in which phthisical patients had continuously resided that, by inoculation of the dust in guinea-pigs (the surest reagent for the indication of the smallest clusters of bacilli), the proof of the presence of the bacilli could be established.

Among 147 observations made in hospitals, lunatic asylums, private dwellings of consumptives, and much-frequented streets, virulent tubercle bacilli were found in 40, while in 69 the dust was free from bacilli, and in the rest of the cases other pathogenic bacteria so quickly caused the death of the animals experimented on that the question remained undecided. Where no phthisical patients resided, 27 exhaustive examinations of the dust never led to the detection of tubercle bacilli. Even in apartments tenanted by consumptives, tubercle bacilli were found only when the patients expectorated into their pockethandkerchiefs or on the floor, and thus allowed the sputa to become dry and to be scattered about in the dust. When the patient expectorated only into spittoons, and never on the floor or in his handkerchief, bacilli were never found, even in his immediate vicinity. The universal distribution of the tubercle bacilli is thus disproved.

If, then, the air is to be looked upon as the medium of conveyance, and the lungs as the primary foci of the infection, the question next arises, How the bacilli come to be in the air, and whence they spring? Only in the bodies of animals and men do the bacilli find the conditions necessary for their development and multiplication. All tubercle bacilli existing in the air must first have been in the body of a man or a beast, and are then conveyed by the air, into which they find admission by drying and mingling with the dust. If bacilli which have become separated from a body fail to get admission into another body, they perish—in the dry state after at least six months; in a condition of putrefaction, after thirty-five days. The aim of prophylaxis, therefore, should be to make the bacilli harmless immediately after they have left the organism.

The idea that the air expired by phthisical persons contains tubercle bacilli or spores is false. The consumptive is dangerous solely through his expectoration. So long as this is moist, there is no danger from the inhalation of it; but from the moment that it dries, it escapes control, and becomes dangerous. It must not, however, be thought that, even after drying, the whole surroundings must necessarily become infected. Into the deeper air-passages only the finest powders can penetrate. The organism is to a certain extent protected by the winding character of the air-channels. It is seldom that the sputum is so finely powdered, and, moreover, it has marked hygroscopic properties. This explains how it is that infection is not so frequent as might be supposed.

Among the essential safeguards of the organism is the physiological bulwark of the lining membrane the cilia of which drive the mucous secretion outwards. Cilia are the microscopic filaments which line the windpipe and bronchial tubes in millions, and drive upwards to the mouth the mucous secretions of the lungs. If this membrane with its cilia has been removed from extensive surfaces, as for instance, in measles, whooping-cough, &c., the germs naturally drawn in with the breath continue to adhere to the mucous membrane; in the same way there are persons of weakened constitution, whose ciliated epithelium works less efficiently, and who are therefore more exposed to infection. These complex circumstances suffice to explain how the fact of tubercular infection has so often been denied. The dried sputum always constitutes the chief danger. The habit of spitting on the floor or into a handkerchief is the best conceivable way of quickly transforming the sputum into a fine respirable dust. This habit must, therefore, be opposed in every possible way. In all closed rooms the expectoration must be voided into a spittoon. This plan is simple, does not interfere with social conditions, and entails no heavy expense. This method of prophylaxis is based on the self-preservation of the consumptive patient, as the dangers referred to threaten himself first of all.

As, however, in most cases it happens that the patient, before either he or those about him have any suspicion of the nature of his disease, has already begun to expectorate infective material, the rule should be established of looking upon all secretions as liable in drying to become more or less dangerous; and the desirability of expectorating into a special receptacle should therefore be insisted on. Little confidence should be placed in mere disinfection of the sputum. A 5 per cent. solution of carbolic acid kills tubercle bacilli only after twenty-four hours; a 1 in 1,000 corrosive sublimate solution still later. Sputum should not on any account be left so long.

Consumptive patients should wear their beards short, should use their own spoons, glasses, &c., should avoid kissing on the mouth, &c. If death occurs, the walls of the room inhabited by the deceased should be rubbed with freshly baked bread. Furniture, beds, and linen must be disinfected. Prevention, however, should not begin when the disease breaks out in a family, but the entrance of tuberculosis into the family should be prevented. Neither a consumptive mother nor a consumptive wet-nurse should suckle a child. Cow's milk should be used only when well boiled. Children must early be made to give up the bad habit of putting all possible objects into their mouths. All contact with

strangers must be closely watched. Healthy servants should be chosen. Diseased children should be kept away from school.

The cleaning of apartments should be carried out as far as possible without raising dust. In changing houses the walls should be cleaned. Spittoons should be placed in all rooms, on staircases, in offices, factories, &c. The custom of spitting on the floor or in the handkerchief must be suppressed—by positive prohibition if necessary. Public disinfecting establishments must be constructed. In hospitals isolation of phthisical patients is desirable. An inquiry has shown that the hasty dipping of a laryngoscope into a 5 per cent. carbolic acid solution is not sufficient to obviate the danger of infection; it is, therefore, necessary to use a special mirror for each patient.

The use of tuberculous meat, and of milk from tuberculous cows, must be prevented by legislative enactment. Special institutions for phthisical patients should be established outside cities. The chief brunt of the struggle against the disease, however, always falls on the physician, who will do more good by the instruction of the public than by prescriptions. In the same way as accidental diseases arising from wounds and puerperal fever have been effectually combated to an extent previously undreamt of, it is to be hoped that, in the case of tuberculosis also, the labours of which it has been the object will in the not distant future be abundantly rewarded.

MEDICAL OPINIONS ON THE REGISTRATION OF PLUMBERS.—At the Public Health Section of the Congress of the British Medical Association at Leeds, Dr. H. Tomkins (Leicester) moved, and Dr. Caldwell Smith (Motherwell, N.B.) seconded, the following resolution, which was unanimously adopted: "That this Section strongly approves the movement set on foot by the Worshipful Company of Plumbers, as serious defects in the plumbing work of dwelling-houses are constantly leading to disease and ill-health, and demonstrate the need that exists for the more rigid supervision of plumbers and their work."

ATTENTION to cleanliness is decidedly conducive to longevity, and we may congratulate ourselves on the general improvement in our habits in this respect. Frequent washing with warm water is very advantageous for old people, in whom the skin is only too apt to become hard and dry; and the benefit will be increased if the ablutions be succeeded by friction with coarse flannel or linen gloves, or with a flesh brush. Every part of the skin should be thus washed and rubbed daily. The friction removes worn-out particles of the skin, and the exercise promotes warmth and excites perspiration. Too much attention can hardly be paid to the state of the skin: the comfort of the aged is greatly dependent upon the proper discharge of its functions.

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Healthy Houses

"A happy home must be a healthy home."—*Anon.*

COOKING AND HEATING BY GAS.

BY JOSEPH R. THOMAS, C.E.

A SHORT time ago, General Hickenlooper, President of the Cincinnati Gas Company, brought prominently to the notice of the resident architects and builders the desireableness of placing in buildings, while in course of erection, not only all pipes and fittings, but also the appliances for utilizing illuminating gas as an agent for cooking and heating. Were the advice then given strictly followed out, and the appliances placed as recommended, the result in the near future would be a large increase in gas sales in that city. The course pursued by the General in thus calling attention to this subject is not alone very commendable, but also might be profitably followed by the executives of all other gas companies.

The proper time for placing gas cooking and heating appliances would certainly seem to be when the building to contain them is progressing to completion; for it is obvious that by attending to that work at this time it cannot only be accomplished much more satisfactorily, but also at less cost than if the fitting-up is the result of an after-thought. Is it not plain that, when such appliances are not in the finished structure, and so have to be installed when the buildings are completed, and possibly occupied, the insertion of the necessary piping is troublesome and annoying to the occupant? Under such conditions floors have to be taken up, casings, &c., removed, and tiled hearths frequently disturbed, so that the necessary connections may be made and placed. The trouble and vexation so caused—partly real, although hardly so great as that anticipated—deter many from having their houses arranged for gas, who would, were it otherwise, or with the premises fitted properly at the outset, gladly avail themselves of the opportunity to use gaseous fuel.

Almost all of our modern houses are fitted with open fireplaces intended for grate fires, but the installation is usually arranged for the employment of any of the prime solid fuels—wood, anthracite, or bituminous coal. As it is well known, none of these commodities are very low in price, and the opportunity is thus offered of competing with them successfully by means of gaseous fuel. What better way can be found to secure this result than by first bringing its many advantages prominently before the public, clinching the introduction by proving that it is not only advantageous but economical.

The annoyances that precede and follow the use of solid fuels are very pronounced, and the banishment of the vexation caused by their presence will more than compensate for any presumed apparent saving in expense to be realized from their employment. Dirt and ashes have to be removed, and although the operation be attended to as carefully as may be, it is impossible to complete it without generating a dust-cloud that later on spreads itself over the room and its furnishings, to the injury of both. This nuisance alone, of the many caused by solid fuels, is a serious one. Therefore, were the many advantages obtainable by the substitution of gaseous for other fuels properly and forcefully brought out, coal, wood, ashes, and all the discomforts in their train would soon be relegated to their proper domain.

If we consider carefully the merits of gaseous fuel, and the relative superiority it bears to other fuels, little argument is required to convince the most obdurate of

its convenience. As to its advantages, of course the cleanliness attending its use is marked and patent, and then we have it always at hand and ready; but one of its most valuable features, when devoted to heating purposes pure and simple, is that by it as much or as little heat can be maintained as may be required, while at the same time it is completely under control. The degree of heat and the rate of consumption can be effected by simply turning on or off the gas supply. On the other hand, when depending upon wood or coal for heating, dust and ashes are not the only things the housekeeper has to contend with. The fuel supply, having been stored, must be reconveyed from its storage place to wherever in the house it is needed; and in doing this walls are frequently battered and damaged, carpets are more or less worn—especially on stairways—by constant tramping; and where many fires are maintained, an additional expense for servants is entailed.

It appears to be a well-settled fact, from its having been so often brought unpleasantly to one's notice, that the furnaces for heating our houses, whether they be of the *bon mot* design or other type of manufacture, have their ups and downs, and "go off into the dumps," very similar to those which occasionally take possession of the kitchen angels. At times like these, when the weather is cold, with the mercury seemingly struggling hard to slip out of the bottom of the thermometer bulb, when of course considerable heat is required for warmth and comfort, it is that the furnace takes on its dumpy mood. This may happen, as it often does, just when we are priding ourselves that everything about the furnace is working smoothly and nicely; but a change comes over the spirit of our dreams, and we are abruptly admonished that the reverse is the case, and our felicitious dream of enjoying a genial heat from the glow of the furnace is rudely dispelled. On these occasions the furnace appears to doubt the purpose for which it was intended—that of furnishing heat to make the home comfortable—since it starts off on quite a different tack, and in fact operates more like a refrigerator than otherwise. Whether this peculiarity arises from "pure cussedness," as Artemus Ward used to observe, or to some inherent defect in its construction, would be hard to determine; nevertheless, the fact remains as stated, as every one using furnaces can substantiate. Under the conditions stated, and at other times as well, when supplemental heat is required in our homes, those in possession of gas-heating appliances can cast all care and trouble aside. By the simple act of striking a match to light the gas, the household can in a very short time enjoy the genial heat thus easily procured.

Some of the prime advantages of using gas for fuel purposes are thus exemplified, and there are many others that might be instanced in connection with it; but we think those mentioned are sufficient to convince the most sceptical. With this understanding, no further elaboration may be required in describing the merits of gaseous fuel.

The question, however, is frequently asked, How will it compare in cost with the others? The best answer to such query is to practically bring the matter down to dollars and cents. We will suppose a cold room in which heat is required, the means for raising the heat to be a gas grate, the maximum gas consumption of which is twenty cubic feet per hour. Rating the cost of the gas at one dollar and fifty cents per thousand, the cost of the fuel per hour is just three cents; and this, it must be remembered, is the expense for maintaining the gas supply at the maximum of the grate's gas capacity. As the room becomes heated the quantity being consumed can be lessened; hence, during the actual time of heating, the probable actual cost will not exceed one or one and one-half cents per hour.

When used for cooking purposes fifty cubic feet of gas will easily cook a dinner for fifteen or twenty people. At the price above named this will cost seven and one-half cents. Twenty cubic feet of gas will as readily cook a dinner for six or eight persons, and the cost of the operation will be just three cents—in fact we have known of a breakfast that was prepared for four people, the cost of the gas used being but a little in excess of two cents. It is obvious that cleanliness and convenience are assured by gaseous fuel; and the figures of cost, as instanced above, either for cooking or heating, prove its economy. It is safe to assume were the gas that is now manufactured freely utilized for cooking purposes, its cost would not exceed one-half that now paid for the solid fuels employed to a great extent to accomplish the same purpose.

Many honest and inquiring minds are now engaged in attempts to solve the problem of how to produce a cheap and efficient fuel gas, and much time and research are being devoted to the subject. To these students we would say keep right on in your endeavour to produce a fuel gas that will prove satisfactory under all its conditions. Should you not be successful in obtaining all you are striving for, you will undoubtedly gather much knowledge and experience in the undertaking which will be valuable in the future; but at the same time, while you are doing this it will also be well to try in every manner to introduce as a cooking and heating agent the gas you are now manufacturing. It is a well-known fact that the fuel gases now enjoying the greatest share of favour will not compare in their heating properties with that supplied for illuminating purposes; therefore it is more advisable to do all you can with what you now have until something of better quality be found that will supersede it for furnishing heat with greater economy.

The One Who Trembled.—Madame de Sévigné in one of her letters sent the following anecdote to a friend: "The Prince once said to his new surgeon: 'Do you not tremble when you bleed me?' And the little surgeon answered: 'Pardon, sir, it is you who tremble!' and he told the truth."

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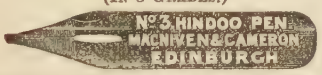

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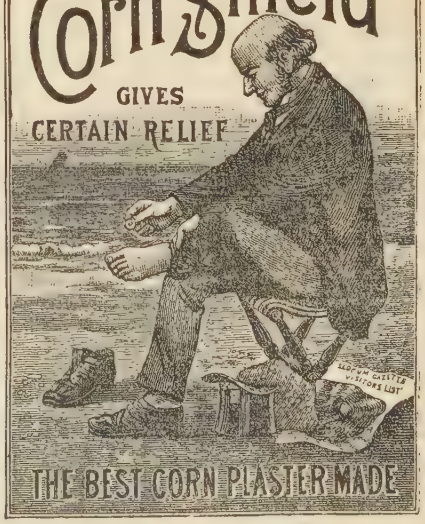

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Popular Science Papers

"Blessings on Science! When the Earth seemed old,
When Faith grew doting, and our reason cold,
'Twas she discovered that the world was young,
And taught a language to its lisping tongue."

—*Charles Mackay.*

VIBRATION IN CYCLING.

Dr. Richardson in the last number of his *Asclepiad* says :—I am of opinion from all that I have seen since I became practically acquainted with the art of cycling, and with those who practise it, either for competition, pleasure, or business, that nothing produces so much injurious fatigue, or so much bad effect on the health in cycling, as vibration. I speak also from personal experience on the matter. I was once more wearied by a short ride to Hammersmith on a tricycle which vibrated intensely than by any other ride I ever took on a machine at any other time, short or long. Moreover, the effect, which lasted several days, was something more than mere fatigue. It was like a shock to the nervous system, causing a continued feeling of vibration through the body, a sense of nausea, and a degree of nervous prostration, accompanied with a reduced power of the lower limbs which, to say the least of it, was very inconvenient and which in a feeble person might be attended with actual risk.

The cause of this mischief lies in the infliction on the body of spinal shock. It is very much like, and in essence is the same as, that kind of shock which is met with, sometimes, in railway accidents; the only difference, probably, being that in the railway accident the injury is inflicted by one or two concussions, violent enough to cause the shock, while on the cycle the mischief is brought about by an immense number of minor shocks which produce the injurious effect from an accumulative action upon the spinal cord, and through it, to some extent, upon the brain. I am supported in this view by another experience which places the fact in a most conclusive way. I was travelling one morning, in Yorkshire, by train, and, from some peculiarity of the carriage, or of the line, the floor and seat of the carriage began to vibrate in a most uncomfortable manner. At first we, who were occupants of the carriage, took little notice of the inconvenience; but by-and-bye, as the nuisance continued, we began to look at each other and then to express ourselves as people do when they are under a common grievance. After a time some of the passengers stood up, and all tried that resource, but did not find the relief they expected; and, in the end, one of the passengers became so agitated that we were on the point of stopping the carriage, when, fortunately it came to a stop by the circumstance of our arrival at a station, where we all got out. In this instance the vibration was the sole cause of the discomfort; there was connected with the effect no muscular work like that which is carried on in cycling, but, to my sensation, the results were precisely the same; I was rendered so wearied that I did not get over the sense of fatigue for twenty-four hours, and I felt just the same painful reduction of muscular power in the lower limbs, extending even to the muscles of the back, as was indicated when the vibration affected me from the tricycle.

I recall also that, in the early years of cycling, when the old so-called "bone-shaker" was the order of the day, a young and strong fellow came to me complaining of very serious sensations from a few rides which he had made. The distances were so short that, at the time, it seemed difficult to believe the injury had been produced by mere muscular exertion, although it was put down to that, and the machine was thrown aside in consequence. Now we know better, and the truth should duly impress us with the necessity of insisting on our ingenious mechanical constructors stopping at nothing less than the perfection of a machine which shall be absolutely free of vibration, or at least, so free of it that no serious discomfort shall arise from it, and so little fatigue that, in a competition of either speed or endurance, the maximum of vibration shall cause the minimum of interference. If this be done, a time will come when it will be possible to register, in relation to any machine on the market, what amount of vibratory labour it saves, in the same way as we calculate for weight of a machine or reduction of friction. This will be a vital advance in the art of cycling by human effort, because in cycling we must work, but we need not vibrate. In other words, vibration is so much imperceptible work thrown away.

Cycling is now becoming so popular amongst medical men, and so useful to them in their professional toil, that I make no apology for publishing, in this place, the latest particulars on the subject of saving of vibration, from notes taken after a visit to the Stanley Exhibition of Cycles at the Crystal Palace in February last.

From time to time attempts have been made to overcome the loss of power incident to cycling from vibration, but not until lately with much success. The omission is quite pardonable for two reasons: first, because an immense deal had to be done in the way of lessening weight, improving bearings, and the like; and, secondly, because the full importance of the subject had to be detected before sufficient attention could be paid to it as a new line of progress towards the perfected machine.

The first methods for overcoming vibrations were made with the saddles and seats, in the way of springs and different kinds of suspensions, and here for a long time the matter rested. Then it was found that vibration was communicated through the handles, as well as through the saddle, and at a very early stage I endeavoured to meet this on my machine by having thick India-rubber handles both for the steering and for the resting or rigid handle. Another advanced step was taken in the construction of a machine in which India-rubber cased in metal was used to take off vibration from both wheels. This, if my memory serves me rightly, was only applied to the bicycle. A further advance was next carried out in the introduction of thicker India-rubber tires, these in some cases running to an inch in thickness, and with decisively good results. During the last two or three years very great improvements have also been made in the character and the form of the springs on which the saddles are mounted.

There are now some seventy machines in which, with more or less of completeness, this matter of vibration is specially considered, the reason for such attention being largely due to the introduction of the small wheels, and of the Cripper-pattern tricycle and the Safety bicycle. What may be called new principles of construction have thus been invented.

In one machine the principle aimed at is to let the whole of the weight of the rider be suspended on springs which, taking their base from the frame, are so placed that there is no loss of power through the use of the springs, the pedals and the saddle remaining at a fixed

distance. This attempt is very ingenious, and in the right direction. The objections to it are that it is not quite perfect, and that it is as yet somewhat heavy and, some think, clumsy in its action. Connected with this plan I must also name a most ingenious contrivance for lateral movement by which vibration on either side is prevented. In a second class of attempted non-vibratory machines the object is sought to be attained by the employment of springs placed on the forks. By this means much vibration is saved without serious addition of weight or complication, but with the advantage of giving to the wheel most extensive play in meeting obstacles that may lie in the path of the rider.

The objection to the class of design now under consideration is the loss that may occur through the springs, which loss is taken from the propulsion. The objection is not without its weight; but, admitting so much, there is undoubted gain in the long run. I have practically tested the principle in one machine in which it forms a part, and I confess to have been agreeably surprised with the result. In short, I would prefer to lose more power than is lost in order to save what would otherwise be lost by the interference from vibration.

Over and above the methods named there is a principle at work in some of the non-vibratory machines which promises well, and which, adopting the language of the electricians, may be called break or disconnection of vibration in circuit. By this means that which would become a vibratory surface, if it remained in direct connection with the prime vibrating surface, or if cut off from the primary by a series of connecting links placed in chain, and which cause break of circuit. This excellent principle, as applied to the handles of one machine, is, I can say from practical trial, extremely effective, and I believe it is equally good in another machine where it is applied to the driving wheels and steering wheel as well as to the handles.

In another class of machine the attempt to save vibration to the rider is performed by introducing the spring-action into the wheels. As there is no necessity for adding weight, or causing any complication or any weakness in this method, I should not be surprised to see it become widely adopted. The adoption would not be free of the charge that with the resiliency obtained there would be some loss of propulsive power, regarding which the same rule would apply as to the value of one saving against another. But there is no reason why resilient wheels might not be used in combination with the other methods until such a perfect machine is invented that a thoroughly rigid frame shall sustain a set of bearings for the rider that shall cut off vibration from every point of his body that comes in contact with them, and yet interrupt, in no way, the complete application of propelling power.

SCIATICA CURED BY GALVANISM.—Surgeon-Major W. Stoney describes in the *Medical Press* the case of a soldier who was treated with salicin and hypodermic injections of morphia, the latter only producing relief. The continuous galvanic current was applied over the sciatic region and down the leg twice a day; the treatment being continued for a fortnight, when the patient was discharged quite well.

LONDON NECROPOLIS, Brookwood, Near Woking, Surrey. The largest and most beautiful cemetery in England. Five hundred acres exquisitely planted. Simple funerals. Earth to earth coffins can be used if desired. Pamphlets gratis. Apply—SECRETARY, 2, Lancaster-place, Strand.—[ADVT.]

Jottings from the Journals

"Th' ingredients of health and long life are
Great temperance, open air,
Easy labour, little care."—*Sir Philip Sydney.*

Naval Hygiene.—Equal in importance to a seaworthy fleet is it to have seaworthy sailors, and whilst we are engaged in testing the fighting qualities of our ships we ought not to forget the men to whose care they are committed. And this is the more important, since it is obvious that increase in the number of our ships does not really mean an increase of naval power unless there is a corresponding increase of sailors to man them. It is out of our province to inquire into the truth of the statement that the naval review and manœuvres have shown that the home fleet is undermanned. The statement, however, has been made by responsible persons, and will no doubt receive due attention from those especially qualified to discuss such matters. Whatever that discussion may reveal, one fact is evident, that discontent exists among the seamen and petty officers on board certain of the more modernly constructed ships, not on account of unavoidable discomforts brought about by the exigencies of their construction and the necessary sacrifice of space for the accommodation of huge coal bunks, enormous boilers, and machine-worked guns, but because no adequate attempts seem to be made to improve conditions of life on board. Ever since the days of Lind, the medical officers of our fleets have endeavoured to the utmost of their ability to improve the condition of the sailor's life on board ship; and we have only to turn to the text-book on Naval Hygiene to see what excellent work has been effected. But, unfortunately, their efforts have not always been appreciated or seconded by the authorities, and many hints which, if adopted, would have improved the sanitary conditions of recently constructed ironclads have been passed over unheeded. Among many desirable improvements would be a rearrangement of the sailor's dietary. The science of victualing ships has made enormous strides of recent years, but with all this the sailor's dietary is even more defective than the soldier's, which has recently been subjected to severe criticism. The allowance as it stands is defective in quantity; it is also too frequently, as we hear, defective in quality. Owing, moreover, to the crowded condition of the ships, sufficient space is not always allowed for the cooking ranges, and many minor discomforts arise from this which might be obviated by the employment of improved ranges. We pass over the monotony of the prescribed rations, merely remarking that there is no excuse for them nowadays, and that a more varied dietary could easily be arranged at no extra cost. But we must heartily condemn the practice of serving out nothing after the midday meal till the mid day meal of the next day, except a little tea or cocoa with hard biscuit. This cannot be sufficient to keep a man in health, exposed as the sailor is to cold and wet above and to steam and damp below deck. What refreshment can there be after the previous evening fast, to come down after a night or early morning watch to a breakfast of dry biscuit and cocoa? Instead of allowing the men to gorge themselves at midday, the allowance should be divided and a good evening meal secured. We could speak of many other points calculated to improve the health of the men and render the service more popular, and such reforms must be undertaken if we hope to man our fleets with really seaworthy sailors.—*Lancet.*

Mental Activity and Old Age.—In order to prolong life and at the same time to enjoy it, occupation of some kind is absolutely necessary; it is a great mistake to suppose that idleness is conducive to longevity. It is at all times better to wear out than to rust out, and the latter process is apt to be speedily accomplished. Every one must have met with individuals who, while fully occupied till sixty or even seventy years of age, remained hale and strong, but aged with marvellous rapidity after relinquishing work, a change in their mental condition becoming especially prominent. There is an obvious lesson to be learnt from such instances, but certain qualifications are necessary in order to apply it properly. With regard to mental activity, there is abundant evidence that the more the intellectual faculties are exercised the greater the probability of their lasting. They often become stronger after the vital force has passed its culminating point, and this retention of mental power is the true compensation for the decline in bodily strength. Did space permit, many illustrations could be adduced to show that the power of the mind can be preserved almost unimpared to the most advanced age. Even memory, the failure of which is sometimes regarded as a necessary concomitant of old age, is not infrequently preserved almost up to the end of life. All persons of middle age should take special pains to keep the faculties and energies of the mind in a vigorous condition; they should not simply drift on in a haphazard fashion, but should seek and find pleasure in the attainment of definite objects. Even if the mind has not been especially cultivated, or received any decided bent, there is at the present day no lack of subjects on which it can be agreeably and profitably exercised. Many sciences which, twenty or thirty years ago, were accessible only to the few, and wore at best a somewhat uninviting garb, have been rendered not merely intelligible, but even attractive to the many; and in the domain of general literature the difficulty of making a choice among the host of allurements is the only ground for complaint. To increase the taste for these and kindred subjects is worth a considerable effort, if such be necessary; but the appetite will generally come with the eating. The possession of some reasonable hobby which can be cultivated indoors is a great advantage in old age, and there are many pursuits of this character besides those connected with literature and science. Talleyrand laid great stress on a knowledge of whist as indispensable to a happy old age, and doubtless to many old people that particular game affords not only recreation, but a pleasant exercise to the mind. It is, however, an unworthy substitute for higher objects, and should be regarded only as an amusement and not as an occupation. Whatever be the sphere of mental activity, no kind of strain must be put upon the mind by a person who has reached sixty-five or seventy years. The feeling that mental power is less than it once was not infrequently stimulates a man to increased exertions which may provoke structural changes in the brain, and will certainly accelerate the progress of any that may exist in that organ. When a man finds that a great effort is required to accomplish any mental task that was once easy, he should desist from the attempt, and regulate his work according to his power. With this limitation, it may be taken for granted that the mental faculties will be far better preserved by their exercise than by their disuse.—*Dr. Roose, in the "Fortnightly Review."*

Sanitary Appliances, Etc.

A NEW DIGESTIVE FOOD.

From the Glen Mills Company, of 2, St. Stephen's-green North, Dublin, we have received a sample of their "Phœnix Food;" a product intended to serve as an article of diet adapted for infants and invalids. Our examination of this food proves it to be rich in albuminous matters (nearly twenty per cent.), starch, and sugar, while fat is adequately represented. This product, therefore, contains that combination of nitrogenous and non-nitrogenous elements which is necessary for the support of life; and for children above the age of six or eight months, for whom starch is suitable as a dietetic article, and for invalids, the Phœnix Food appears to us to be thoroughly well adapted. As regards its digestibility—always an important question in connection with such a product—we can also speak with some degree of authority. Various trials made with it show that it is readily assimilated, an opinion confirmed by the lady-superintendent of the National Children's Hospital of Dublin, who expresses her confidence in the Phœnix Food as a nutritive and easily digested article of diet for infants. For invalids we should also recommend a trial of this product. It is readily prepared, and can be added to soup if desired.

Magazines of the Month.—*Belgravia* presents its usual array of bright fiction for September, and *The Gentleman's Magazine* is full of entertaining articles, among which Dr. Crespi's paper on "Pine Forests" will be read with interest. In *Harper's*, the chief paper is one on "American Artists at the Paris Exhibition," a paper beautifully illustrated. Mr. Lillie's article on "Coger's Hall, and other London Mock Parliaments," is also entertaining, and is largely aided by Mr. H. Furniss's drawings. *Babyhood*, as usual, gives us a number of wholesome articles relating to infant life. Every mother should read this magazine. *Public Health* continues successfully to represent the opinions of medical and sanitary officers. Mr. Blyth is evidently an expert editor. Messrs. Cassell's serials, the *New Popular Educator* and the *Illustrated History of England* are issued in the 11th and 35th parts respectively. *The Season* for this month is bright and attractive, as a journal of ladies' fashions should be. Its plates are artistically executed. Dr. Richardson's magazine, *The Asclepiad*, comes as a quarterly testimony to the wonderful literary powers of its author. It is without a parallel in respect of its being the work of one man, and that an able and accomplished, as well as a busy physician.

Heredity of Short-sightedness.—Dr. Motais, of Angers, read a note lately in Paris on the "Heredity of Myopia." The author had examined the families of 330 young myopic subjects, and arrived at the following conclusions: 1. The hereditary influence of myopia is manifest. 2. It exists in 216 out of 330 families. 3. Hereditary myopia is characterized by its early appearance, its comparatively rapid development, and the high average of its degree. 4. Myopia is transmitted by the father to the daughter 86 times out of 100, and by the mother to the son 79 times out of 100. Heredity is crossed.

Special Notice.—The best stimulant for dietetic and other purposes is the "Skerryvore" (Registered) Blend of Fine Matured Scotch Whiskies, certified of the utmost purity by Mr. E. G. Clayton, F.C.S., Member of the Society of Public Analysts. Sold only by John Twatt, 36, Argyle-place, Edinburgh. Price 20s. per gallon, bottles and cases included.—[Advt.]

IMPORTANT ANNOUNCEMENT.

BONUSES TO SUBSCRIBERS TO "HEALTH."

HEALTH, as our readers are aware, may be obtained of all Booksellers and Newsagents, and at the Railway Bookstalls, on the day of publication. It may also be ordered from the PUBLISHER, 2, Paternoster-square, London, E.C., who will send the journal, post free, for a year, on receipt of postal orders for 10s. 10d.

As many of our readers who live in remote districts prefer to obtain HEALTH from the Publisher direct, and as we are desirous of increasing the already large number of subscribers who give us a yearly order for the journal, we offer the following FREE GIFTS and BONUSES to all who subscribe to HEALTH for one year or longer :—

(1.) To each Subscriber who remits 10s. 10d. to the Publisher, entitling him (or her) to receive one copy of HEALTH, post free, for one year, we shall present a copy of Dr. Andrew Wilson's work, entitled "A Manual of Health Science" (Longmans & Co.), value 2s. 6d.

(2.) To each subscriber who remits 21s. 8d., entitling him or her to receive two copies of HEALTH weekly, post free, for one year (or one copy for two years), we will present Dr. Richardson's "Ministry of Health" (Chatto & Windus), value 6s. The copies of HEALTH so ordered may be posted to separate addresses.

(3.) To each person who subscribes 32s. 6d., for three copies of HEALTH, post free, weekly, for one year, we will present the volume by Dr. Richardson mentioned above, and also the handsome, illustrated book entitled, "Studies in Life and Sense," by Dr. Andrew Wilson (Chatto & Windus), value 6s.—being a free gift of the total value of 12s.

The bonus last mentioned will also be presented to anyone who succeeds in obtaining three yearly subscribers to HEALTH, and who remits to the Publisher the sum of 32s. 6d., together with the names and addresses of the persons to whom the copies are to be posted each week.

As the literary gifts above-mentioned constitute books containing solid and reliable information regarding health and other matters of popular scientific interest, it will be seen that the above scheme, while intended to increase our already large circulation, also offers distinct advantages to new subscribers who guarantee by their subscriptions a year's support to this journal. All communications regarding subscriptions and other purely business details connected with HEALTH should be addressed directly to the PUBLISHER, 2, Paternoster-square, London, E.C., and *not to the Editor.*

Our Letter-Box

"Conference [maketh] a ready man."—*Bacon.*

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including Books for Review, Specimens of Sanitary Appliances, &c.), to be addressed to "THE EDITOR OF HEALTH," 2, PATERNOSTER-SQUARE, LONDON, E.C. *Those intended for the Publishing Office to be sent to* MR. A. P. WATT, THE PUBLISHER, *at the same address.*

RULES FOR CORRESPONDENTS.

OWING to the mass of letters which reaches us each week, we respectfully direct the attention of Correspondents, desiring replies in the LETTER-BOX DEPARTMENT of HEALTH, to the following rules :—

"ELECTRICITY IS LIFE."
(TRADE MARK.)

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ROYAL COLLEGE of PHYSICIANS of LONDON.

RECENT TESTIMONIALS.

GALVANISM *v.* RHEUMATISM.
109, Ingfield-road, East Grinstead, 7th August, 1889.
Dear Sir,—I have great pleasure in stating that the Galvanic Belt I purchased from you for my wife, who was suffering from Rheumatism, has acted most satisfactorily in every way.
I have recommended your treatment to several of my friends for the cure of Rheumatics, and I only hope they may reap the same benefit my wife has done.—Yours respectfully, E. S. SMITH.
Mr. J. L. Pulvermacher, 194, Regent-street, W.

GALVANISM *v.* RHEUMATISM.
203, Corfield-street, Bethnal-green-road, London, 22nd July, 1889.
Dear Sir,—I consider your Galvanic Belts are worth their weight in gold, and I shall always recommend them to my friends. I have entirely recovered the use of my leg; and my mother, who is seventy-three years of age, has been cured of rheumatism. I cannot speak too highly of your treatment, which has been a blessing to my whole family, and some friends in Lowestoft tell me they would not be without one of your Belts in the house for any money.—Yours respectfully, (Mrs.) A. THURSTON.
Mr. J. L. Pulvermacher, 194, Regent-street, W.

GALVANISM *v.* SEVERE PAIN AND EXHAUSTION.
Stratton, Cornwall, 16th July, 1889.
Dear Sir,—I am happy to inform you that the patient for whom I purchased your Galvanic Belt experienced most decided relief from pain in twenty-four hours, and has since continued to progress. Before trying your treatment the patient was in a state of continual pain, at times agonizing, and we felt life could not much longer endure the strain. The patient is also greatly improved in general health, and is wonderfully better in every way. Privately I shall be willing to answer inquiries—stamped envelope being enclosed.—Yours faithfully, W. R. H. WILLETT.
Mr. J. L. Pulvermacher, 194, Regent-street, W.

GALVANISM *v.* NERVOUS DEBILITY & HEADACHE.
Alvaston, Derby, 6th July, 1889.
Gentlemen,—I am pleased to say that I have derived great benefit from your Galvanic treatment, and when talking to any one in our town or wherever I may be, I always recommend you, because I have now proved your Galvanic Belt to be the best remedy for nervous headache and nervousness generally that I have ever tried.—Yours very truly, W. S. WOODWARD.
Messrs. Pulvermacher & Co., 194, Regent-street, W.

GALVANISM *v.* LOCAL WEAKNESS.
Finchley, near London, June 23rd, 1889.
Dear Sir,—In October last you supplied me with a Chain Battery Combined Band and Belt, from which it is no exaggeration to say I experienced relief in a few days, and in five months was completely cured of the local weakness from which I was suffering for more than three years. I had tried various remedies without effect, but your method operated at once. It is simple, natural, and safe, and I only wish the thousands who, it is grievous to think, are suffering from these dire maladies, could hear of and give a a trial to your treatment.
Allow me to thank you again most sincerely for the kindness which you personally showed me at a critical and perplexing moment. I shall not easily forget it, but doubtless you are compensated by that generosity of heart which brings its own reward. I enclose my card, and you are at liberty to publish this and to refer any one to me privately, but I particularly desire my name to be suppressed publicly.—Gratefully yours, "Z."
Mr. J. L. Pulvermacher, 194, Regent-street, W.

GALVANISM *v.* SCIATICA.
Donnington House, Stow-on-the-Wold, June 22nd, 1889.
Dear Sirs,—I am pleased to say that the combined Electric Band you sent me for Sciatica has quite cured me.—Dear Sir, yours truly,
GEO. WHITFIELD.
J. L. Pulvermacher & Co., 194, Regent-street, W.

GALVANISM *v.* NERVOUS EXHAUSTION.
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3. Questions to which answers are desired by post, are so replied to solely at the Editor's discretion. If no answer is sent by post, the query will be replied to in the "Letter-Box" columns of HEALTH. A stamped addressed envelope must accompany all queries to which a private reply is desired.
4. Addresses of physicians and surgeons will, as heretofore, be forwarded FREE to Correspondents on their enclosing a stamped addressed envelope for reply.
5. Correspondents are requested to write on one side of the paper only, and to make their inquiries as brief as may be consistent with clearness.
6. From the necessity of sending HEALTH to press early in the week, no Correspondent can be replied to in the "Letter-Box" columns in the same week in which the inquiry is received. Replies crushed out of any issue will be found in the succeeding number.
7. No Post Cards must be used in sending queries. Violation of this rule deprives the sender of the privilege of a reply.

QUERIES AND ANSWERS.

REPLIES: GENERAL, SANITARY, AND MEDICAL.

[Readers of HEALTH will kindly note that when back numbers of the journal are desired, the letters containing such requests and stamps for the numbers should be addressed to the PUBLISHER of HEALTH, 2, Paternoster-square, London, E.C., and *not to the Editor.*]

W. H. HANNAM.—We do not remember your case; but we advise you to go to a good physician if you are dissatisfied with the report you have received, and cease wasting your money on reports of the kind you enclose. If you wish the reports returned, send stamped addressed envelope. We may say that the symptoms named in the report are not indicative of anything serious, and you can obviate whatever symptoms are present by drinking freely of Vichy Water, and by a little care in diet. Go to a good physician, and do not tamper with your case. Send us an addressed envelope as above noted, and we will recommend a reliable authority.

J. S. JENOURE.—You are suffering from mental overstrain. Take plenty of rest, live freely in the open air, don't worry over anything, and take a teaspoonful of Inman's Syrup of the Hypophosphites in a glass of water, after your meals, twice daily.

ASTLEY GATE.—Certainly not: what you name is a disease; and what you really exhibit is only a natural symptom of excitement. What do you expect if you allow excitement to irritate you? Be wiser in future, and know that you are in every respect perfectly well.

E. MANSFIELD.—Try the following ointment:—Gall and opium ointment, to be had at any druggist's; or acid tannic, twenty grains; bismuth subnit., one drachm; pulv. opii., ten grains; paraffin mollis, one ounce. Mix, and label: "For external use; to be applied on a piece of lint."

S. A. M.—For the itching try rubbing a menthol cone over the parts lightly, or apply a little lotion made by dissolving one drachm of liquor of coal tar (Wright's) in a pint of water, thrice daily.

FUMOIR.—Read the pamphlet, "A Lecture to Young Men" (post free, 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C.)

LETTY.—Try the effect of giving the patient twenty drops of Collis Browne's Chlorodyne, when the symptoms are severe, in a little water; and repeat the dose in four or five hours, taking not more than two doses per day, and only on alternate days.

J. C. SMITH.—The experiments in question cannot, in our opinion, be regarded as certain or successful. Their author and originator himself confesses as much; and they have been made the subject of further observation in America. We shall shortly publish further notes on these experiments, so you may note these additional papers in our pages. The address of the author is simply "Paris," and any communication so addressed would find him; but we cannot certainly advise you to try any such means or methods as he describes.

R. E. A.—Take two of the five-grain tabloids of Sulphonal (Burroughs, Wellcome & Co.'s) at bedtime. If you take the amount of whisky you say you do, your sleep must be due to intoxication. Give up such a pernicious habit at once.

BENEDICT.—1. We should recommend in such a case that the patient should begin taking Fer Bravais as a tonic in twenty-drop doses, after meals, thrice daily. At dinner, a little stout or good claret should be taken. Let us hear how this advice acts. 2. Impossible to answer your question without full details of the habits, &c., of both. 3. Not at all, presuming you feel perfectly well now. Try the plan of husbanding your resources in the way of strength, and of refraining from exercise of that nature save at intervals. This may improve matters, and save any risk of debility from over-exertion.

JAMES JACK.—Try a warm bath at bedtime occasionally, and use brisk friction regularly to the face. Apply a little Vinolia (Roberts & Co., 76, New Bond-street, London, W.) at night to the affected parts, and wash with Vinolia Soap.

DONOVAN.—Send us a stamped addressed envelope, and we may be able to advise you more fully. Restate your case in writing again.

SUSSEX.—Your total abstinence may be too rigid a regime for you. Try the effect of taking a little good claret (or stout, if it agrees better with you) to dinner daily. The medical use of alcohol is that it assists assimilation in persons of sedentary habits. Certainly; more out-door exercise is needed. Why not try cycling? We do not think you need any medicine; but a pill containing two grains sulphate of quinine may be tried, taken half an hour before dinner daily. There are many articles in the volumes of HEALTH dealing with indigestion.

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"Having Lain for Months in an Open Grave."

OUR readers will remember the thrilling chapter "Recalled to Life," which begins Dickens' "Tale of Two Cities." Cases occur in a different field which in interest and surprise almost equal that of the Bastile prisoner. What the secret of life is, and how it can be reached and affected by any agent within the present knowledge of man, is the most exciting problem to be solved by the human intellect. Leaving out of account the instances belonging to what is called the age of miracles, we may take it for granted that there is no well-authenticated case of a person actually dead being restored to life. But there are cases stopping just short of this point, which may inspire our wonder only in a less degree. We cite the following facts as an illustration :—

Several years ago, a woman—Mrs. William Crocker, of South Farmington, Nova Scotia—began to fail in health. Her symptoms puzzled her friends and herself. She had a good deal of headache, a bad taste in the mouth, and cold hands and feet. Her skin took on a kind of yellow or coppery appearance, and she grew dull, sleepy, and indifferent to things that had always before interested her. When walking she would occasionally be observed to stagger, and catch hold of the nearest support to keep from falling. She was often sick, and vomited without apparent cause; the bowels were costive and irregular. There was much heartburn and palpitation, and a frequent rising of a hot and offensive gas into the throat and mouth. In the autumn of 1884 she broke down completely. She complained of a sharp, cutting pain around the heart, and drew her breath with difficulty. There was also a pain on the right side, and great distress and weakness low down in the small of the back.

The lady was placed under the care of the best local physician, who examined her carefully, and said her case was likely to prove a hard one to deal with, and gave her but small encouragement. "All we can do," he remarked, "is to try what remedies we have, and hope for the best." But his utmost efforts for three months produced no favourable results. Her appetite was altogether gone, and how she lived was a wonder. She had now become so nervous and excitable that she was afraid of the least noise as a child is after the firing of a gun. Even the sound of common conversation nearly sent her crazy. She had been plump and of good weight, but now her flesh was gone, and she looked like the mere ghost of the nobly-developed woman once the envy of so many. Seeing that no benefit came of the treatment she was receiving, another physician was employed, who put all his skill into the case for four months; *and in all that time she never slept once except under the influence of opium.* Her condition was such that she fervently desired to die, and her relatives agreed it was the only relief she had the slightest reason to hope for. Once in a while, however, the progress of her disease abated for a brief space, and during these periods the failing woman was able to read for a few minutes at a time. It was on one of these occasions that she took up a newspaper, and, while glancing wearily at its columns, her eye fell upon an article describing a medicine called Mother Seigel's Curative Syrup. Without any especial confidence in the statements therein made, she nevertheless sent to St. John's and bought a bottle, preserving what she had done a secret from the physician. On taking a dose or two of the preparation, she was astonished and delighted to find it had an immediate effect. In a few days she could sleep without the opium, and felt for the first time for months a natural craving for food. What she ate remained on her stomach, and gave her scarcely any distress.

Filled with new hope and confidence, she now avowed what she had done, discharged the physician, sent to Halifax for six bottles more, and used it steadily through the entire winter of 1884-85. She improved rapidly, and in a few weeks, to quote her own words, "*I felt as though I had come back to life, after having lain for months in an open grave.*" By the time spring opened she was able to do all her work. She is now sixty-three years old, enjoys life, and has every prospect of attaining an advanced age. In a recent letter Mrs. Crocker tells her story with an enthusiasm almost too warm for cold type, and says she owes her restoration from the very door of the tomb to the mysterious power of the medicine she saw described in the newspaper.

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